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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

RODÉE, CHRISTOPHER D

ART UNIT PAPER NUMBER

1756

DATE MAILED: 12/10/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/614,240

Applicant(s)

NAKAMURA ET AL.

Examiner

Christopher D RoDee

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 9 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 9 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). ____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____ 6) ☐ Other:

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 9 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 9 is indefinite as presented because it is unclear if the toner in the "characterized by employing" limitation is part of the toner image that is fixed. The claim presents two steps "fixing" and "employing" but there is no connection between these steps to show that the toner is fixed to the recording medium surface. It is also unclear how the "employing" step limits the claim as this step requires only some undefined use of the toner. A "use" without further description of the manner of use is indefinite because this step encompasses all uses possible.

Further, it is unclear if the "flash exposure" present in the fixing step relates to the "flash light" describing a characteristics of the toner in the employing step because there is no clear connection between the noted terms.

The Examiner suggests that the claim be amended to provide clear correspondence between these features.

Allowable Subject Matter

Claim 9 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action. The art of record does not

disclose or suggest a process of fixing a toner image to a surface of a recording medium where the toner image comprised of a toner, as apparently intended in the claim, has a titanium black provided with a hydrophobicity treatment adhered to the toner surface and where the toner image is fixed by the flash exposure specified in the claims.

Lewis in US Patent 4,426,436 discloses a toner having exposed conductive particles in the surface of resin particles (Abstract; Fig. 2). Useful conductive particles having resistivities ranging from $10^9 \Omega\text{cm}$ to $10^{-6} \Omega\text{cm}$ and submicron of size are disclosed (col. 5, l. 62 - col. 6, l. 33). Useful conductive particles include reduced titanium oxide (col. 6, l. 7). Example IX discloses a toner having bisphenol A as a reactant for the binder resin polyester. Lewis does not suggest flash fixing of the toner or treatment of the conductive particles with a hydrophobicity-providing material.

Shibuta in US Patent 4,668,501 discloses a titanium oxide that has its oxygen content reduced by a heating process (Abstract; col. 3, l. 25-55). The produced powder is very fine, highly uniform, electrically conductive, and functions as a pigment (Abstract). The produced powder has resistivities ranging from $10^3 \Omega\text{cm}$ to $10^{-3} \Omega\text{cm}$ (col. 3, l. 41). Example 7 discloses a specific black titanium oxide that is has a resistance of $4 \times 10^{-2} \Omega\text{cm}$ and an average particle size of $0.04 \mu\text{m}$ (col. 6, l. 55 - col. 7, l. 3). The compound is mostly TiO (meets the formula in the specification on page 7 when "n" equals one), with just a trace of TiO_2 . Although this compound appears to be IR absorbent because of its inherent black color, there is no disclosure of giving this oxide a hydrophobicity-providing treatment. Further, because the oxide is disclosed as providing a pigment function there is no reason to use this material in a process where its color would change under the specified flash conditions of the instant claims.

Hattori in US Patent 6,391,508 discloses a toner having titanium oxide particles treated with a specific silane and a specific silicate but the treated titanium oxide is not disclosed as

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being a titanium black having the ability to change color as claimed. Further, the reference does not disclose that the titanium oxide is adhered to the toner surface.

In examination of the instant claims the term "adheres" and "toner" are given their usual and customary meaning. See *Webster's New Riverside University Dictionary*, p. 78, "adhere" and *Handbook of Imaging Materials*, to Diamond, pp. 163-170.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher D RoDee whose telephone number is 703 308-2465. The examiner can normally be reached on most weekdays from 6 to 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Huff can be reached on 703 308-2464. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703 308-0661.

cdr
2 December 2003



CHRISTOPHER RODEE
PRIMARY EXAMINER